

REMARKS

Claims 1-36 are currently pending in the current application. In an office action dated October 30, 2003 ("Office Action"), the Examiner provisionally rejected claims 1-36 for obviousness-type double patenting, rejected claims 1-36 under 35 U.S.C. § 103(a) as being unpatentable over Utter et al., U.S. patent No. 5,815,649 ("Utter") in view of Byers et al., U.S. Patent No. 5,809,543 ("Byers"), and rejected claims 1-36 under 35 U.S.C. § 103(a) as being unpatentable over Muller et al., U.S. patent No. 6,105,122 ("Muller") in view of Blumenau et al., U.S. Patent No. 6,421,711 ("Blumenau"). Applicants' representative will consider filing a terminal disclaimer at the point that the Examiner's obviousness-type double patenting rejection becomes non-provisional. Applicants' representative respectfully traverses the Examiner's 35 U.S.C. § 103(a) rejections.

Please consider claim 1, provided below for the Examiner's convenience:

1. (original) A method of transmitting a network packet from a source node to a destination node, wherein the source and destination nodes are coupled to a fault tolerant storage system (FTSS) via an FTSS interconnection fabric, the method comprising:
transmitting the packet from the source node to the FTSS via the FTSS
interconnection fabric;
storing the packet in highly reliable fault-tolerant storage media of the FTSS; and
transmitting the packet from the FTSS to the destination node via the FTSS
interconnection fabric.

As clearly claimed in claim 1, Applicants' system uses a fault-tolerant-storage system ("FTSS") system to store and forward network communications packets between two nodes, or host computers. In general, network communications systems involve network communications media that, directly or indirectly, through routing nodes, interconnect computers. Communications media include such well-known communications media as Ethernet links and other local area networks, fibre channel connections, WAN interconnections, and other types of communications media. Applicants have recognized that there may be significant available data-transfer bandwidth between computers and FTSSs that, although until now employed only for data transfer operations, such as file transfer and database management system operations, can be alternatively modified for transfer of network protocol packets as an alternative network communications pathway

between two host computers, or, in the terminology of claim 1, a source node and a destination node.

The Examiner cites four references, as noted above, including: (1) the Abstract, Figure 1, lines 41-45 of column 4, lines 10-15 of column 2, lines 22-58 of column 9, and lines 41-60 of column 6 of Utter; (2) lines 63-65 of column 1, lines 45-53 of column 5, lines 36-60 of column 12, lines 12-18 of column 34, lines 3-4 and 32-33 of column 2, lines 15-26 of column 16, and lines 3-4 of column 66 of Byer; (3) the Abstract and Figure 1, lines 52-64 of column 26, lines 7-15 of column 43, lines 22-39 of column 25, lines 39-49 of column 21, lines 14-39 of column 32, lines 13-14 of column 3, lines 9-14 of column 41, lines 47-57 of column 40, lines 65-66 of column 31, lines 51-55 of column 32, and lines 8-11 of column 43 of Muller; and (4) lines 2-7 of column 7, lines 52-61 of column 31, lines 12-21 of column 39, and lines 32-34 of column 2 of Blumenau. However, in none of these citations can Applicants' representative find any teaching, mention, or suggestion of using a FTSS and interconnections between the FTSS and two computers to transfer network communications messages between the two computer.

For example, Utter discloses a conventional, distributed storage subsystem for data storage in a fault-tolerant computer system. In none of the cited passages can Applicants' representative find even the slightest suggestion that computer nodes communicate with one another through the storage subsystems. Instead, as explicitly stated by Utter beginning on line 57 of column 4:

Similarly, the storage nodes 30(s) perform the data processing services for the user terminals 12(d) as described above in connection with the fault-tolerant computer system 11, and the networks 13(n), switches 18(h) and networks 20(k) serve to transfer storage and retrieval requests from the user terminals 12(d) and processing nodes 16(m) to the storage nodes 30(s) which are to execute the request and return any data and status information that is to be returned from the storage nodes 30(s) executing the request. (emphasis added)

Thus, Utter makes it clear that all network activity is devoted to transferring data storage and retrieval requests from a processing node to a storage node and from the storage node to the processing node. Not once does Utter mention or suggest a processing node sending a network message to a storage node, which stores the network message, and then forward that network message to another processing node. Utter is completely unrelated to Applicants' claimed method and system.

Byers discloses an "outboard file cache extended processing complex for use with a host data processing system for providing closely coupled file caching capability" (Abstract). The cited passages of Byers describe various hardware components of the internal buses and links within Byers file cache and between the file cache and host computers, but neither disclose nor suggest a first host computer sending a network protocol message to a second host computer through the outboard file cache. Indeed, all the host computers clearly directly interconnected via communications links, as clearly shown in the Figure shown on the first page of Byers.

Applicants' representative respectfully observes that the Examiner appears to have missed a clearly claimed essence of Applicants' method – namely transfer of a network message from a first computer through an FTSS to a second computer. It is well known in the art to couple multiple host computers to a FTSS, so that each host computer can independently store data to, and retrieve data from, the FTSS. But, this is unrelated to host computers intercommunicating via network messages through the FTSS.

Muller is equally unrelated to Applicants' claimed method and system. Applicants' representative has carefully read all cited passages of Muller, and cannot find one mention or suggestion of sending a network message from a first computer through a FTSS to a second computer. Muller is replete with details about computers sending data storage requests to a second computer, the second computer fetching the data from an attached data-storage device, and then returning the data to the first computer. Muller also discusses traditional data requests from a host computer to a storage node, and return of the data from the storage node to the host computer, but not once suggests that a first computer send a network message to a FTSS, which then stores the network message, and forwards the network message to a second message. The switch nodes in Muller's system are not FTSSs. The data storage nodes are referred to as "ions." Multiple pathways between processors and storage nodes are a necessary component of a FTSS, but are not, in themselves, a FTSS. Muller makes no claim to his system being an FTSS. It is simply a group of storage nodes and processors interconnected through a communications fabric.

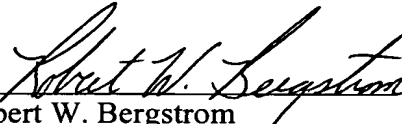
Blumenau discloses a multi-port storage controller. Blumenau makes no mention of a first computer sending a network message to the storage controller for

storing in a storage medium of an FTSS and subsequent forwarding to a second host computer system. Like Muller, Byers, and Utter, Blumenau is simply unrelated art.

Although Applicants' representative can find no mention or suggestion in any of the cited references of a first computer send a network message to a second computer via storing and forwarding on a FTSS, Applicants' representative admits that he may have overlooked something in the four, lengthy references. Certainly none of the cited passages mention or suggest computer-to-computer networking via an intermediate FTSS. Applicants' representative respectfully request that the Examiner please specifically point out where, in any of the cited references, a first computer communicates with a second computer by sending a network message to an FTSS for storage and forwarding to a second computer. Lacking such a teaching or suggestion, Applicants' representative believes that the current claims are non-obvious over any one of, or any combination of, the cited references. All of the independent claims 1, 10, 17, 25, and 34 clearly and explicitly claim a first computer communicating with a second computer by sending a network message to an FTSS for storage and forwarding to the second computer.

All of the claims remaining in the application are now clearly allowable.
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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Enclosures:
Postcards (2)
Transmittal
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Form PTO-1449
Cited references (2)
French Search Report

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